

PROGRAM ANALYSIS:

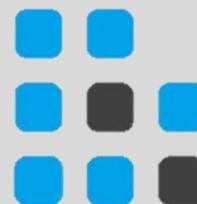
# GEARING UP

A SPORT INDUSTRY RESEARCH CENTER REPORT



**GEARING UP**  
MOVING IN THE RIGHT DIRECTION

# Introduction



This report and efforts in data collection, analysis and interpretation was part of an ongoing collaboration between the Sport Industry Research Center (SIRC) and the Health Behavior Research Clinic (HBRC) in the College of Public Health. Their partnership, along with their joint collaboration with Gearing Up, Inc., led to the successful completion of a proof of concept and feasibility study designed to reduce cardiovascular disease risk in a vulnerable population in a female correctional facility in Philadelphia County, PA.

Successes of this project can be defined in terms of the productive partnership between the two Temple Research Centers and Gearing Up, ensuring (1) sound research and intervention design incorporating evidence-based behavioral intervention components for lifestyle change in a challenging environment; (2) translatable and marketable models that could be implemented system wide and in community settings; and (3) collection of data to provide evidence of feasibility, acceptability and potential efficacy of an innovative health promotion intervention that integrates multiple health counseling modules within an indoor cycling class.

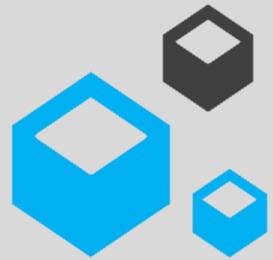
SIRC is a collaborative research network providing innovative marketing and management strategies to enhance the economic, social, and environmental sustainability of sporting events and organizations. The HBRC aims to address unhealthy lifestyle behaviors with innovative, trans-disciplinary strategies to reduce risk of chronic diseases, substance dependence and comorbid mental health problems.

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# Executive Summary

## Assessment Design and Highlighted Findings



### Data Collection Procedure

Participants were recruited for the study through the indoor cycling class that has been operational at Riverside Correctional Facility (RCF), the Philadelphia County Women’s Prison, since 2011. All recruitment for the intervention portion of this study was done once women had already been medically cleared and added to the attendance list for the class, but before participating in their first class.

Surveys were pencil and paper and administered by a research assistant. Physical measures were also gathered by research assistants. Women completed baseline surveys and physical measures either in the gym where the cycling class took place or in the medical services department of the prison. All baseline measures were completed before women attended class for the first time.

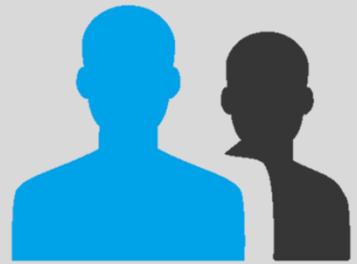
After eight weeks, women were asked to complete follow up measures in the gym (if still participating in class) or were called to the medical services department. A total of 50 women completed the intervention and 39 women participated in the control group.

### Highlighted Findings from the Intervention:

The following notable findings were derived from the data collected. These points are explained in detail in the subsequent sections of this report:

-  Women in the intervention significantly lowered both their resting and recovery heart rates compared to the control group
-  Women in the intervention significantly increased their workout time, while exercise duration for the control decreased
-  On average, the intervention group saw higher decreases in their BMI, body fat percentage, and step test heart rate than women in the control
-  On average, the intervention group saw higher increases in both exercise frequency and intensity
-  A higher percentage of women in the intervention saw positive change in their body image than women in the control
-  A higher percentage of women in the intervention increased their reported intake of fruits and vegetables than women in the control

# Demographics and Profiles



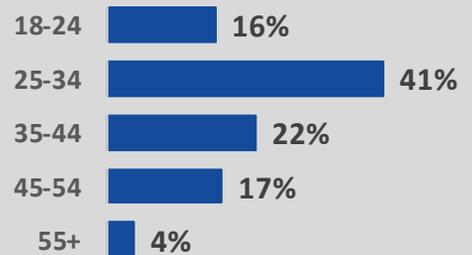
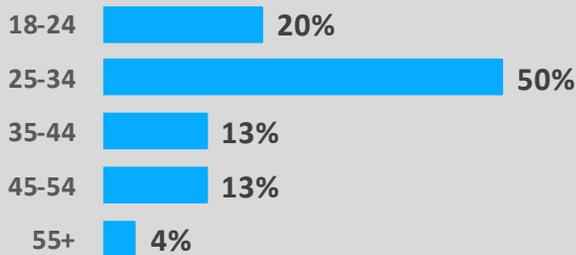
## Providing a snapshot of Participants

This section highlights the profiles of both the women who participated in the indoor cycling program intervention, as well as the women who were part of the control group

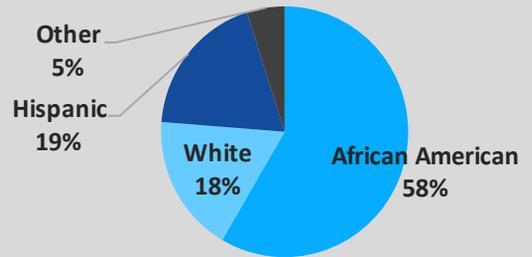
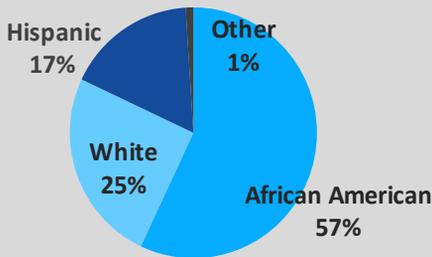
### Intervention

### Control

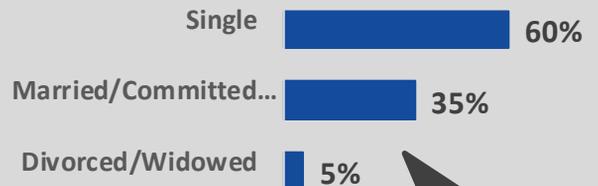
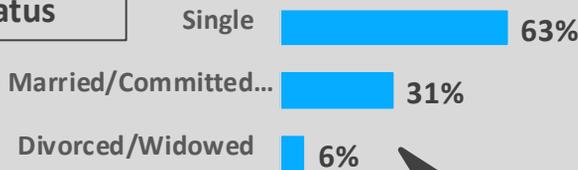
#### Age



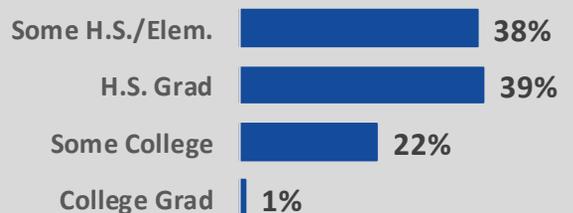
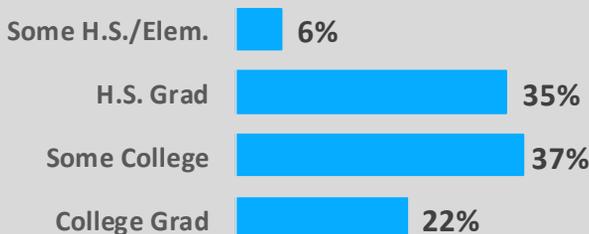
#### Race



#### Relationship Status



#### Education



Avg. # of Children  
**3**

Avg. # of Children  
**2**

# Baseline Profiles (cont'd)...

## A note about the intervention and control groups

In comparing differences in changes overtime between control and intervention, it is important to note that, in addition to the potential self-selection bias of the intervention group, there were several demographic and psychographic areas that were significantly different between control and intervention at the baseline. Specifically, the intervention group:

- Was older on average
- Had higher average education
- Had a lower percentage of individuals with a serious mental illness
- Had a lower percentage of individuals with a serious physical illness
- Had a lower percentage of individuals with substance use disorder

There were no other significant differences between the control and intervention at the baseline, including both physical and psychological measures.



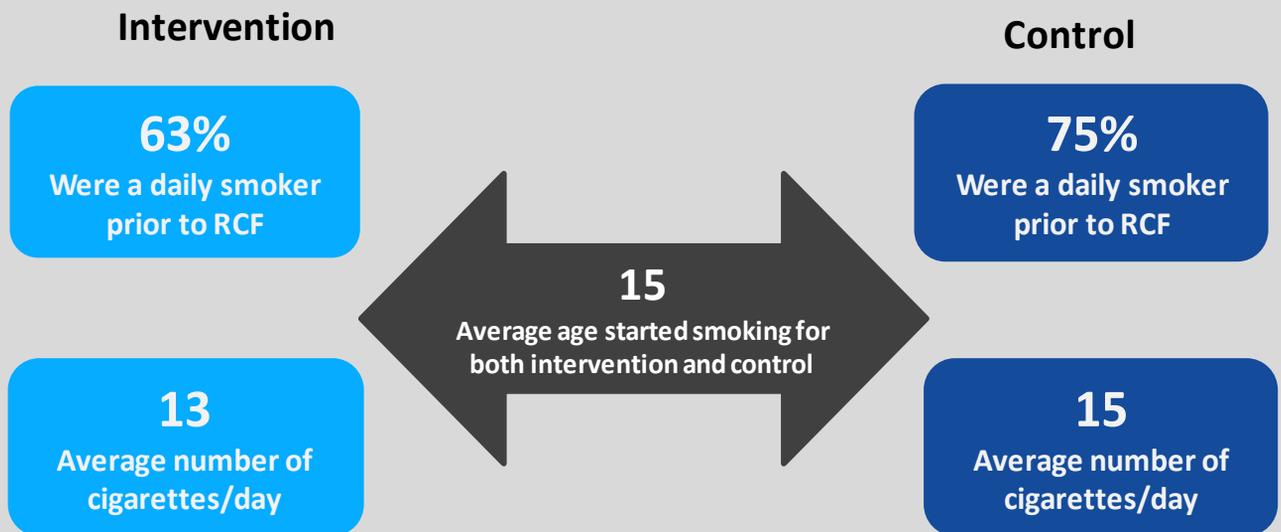
## Intervention

## Control

3	Avg. # Incarcerations	5
9 Months	Avg. length of Current Incarceration	7.5 Months
6.5	Avg. lbs./Month Gained (from intake to baseline)	4.8
7%	% Serious Physical Illness (SPI)	17%
18%	% Serious Mental Illness (SMI)	34%
66%	% Substance Use Disorder (SUD)	79%
172	Avg. Weight at Baseline	164
33.8	Avg. BMI at Baseline	33.1

# Baseline Profiles cont...

## Smoking profile



## Nutrition

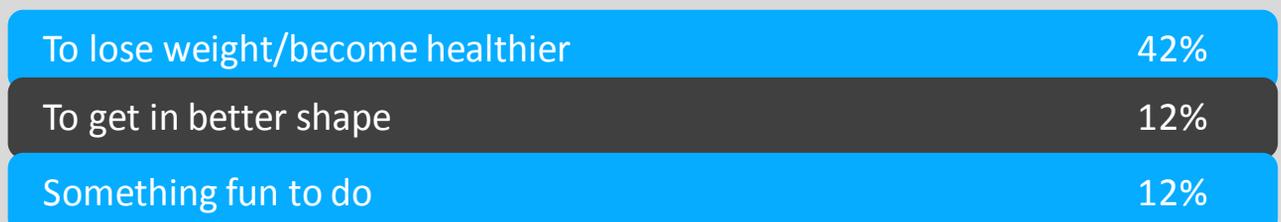


## Motivations of Intervention Participants

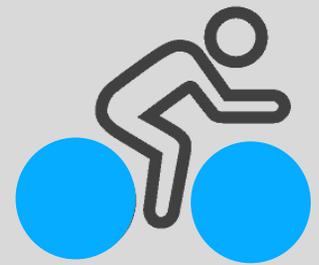
### How did you hear about Gearing Up?



### Why did you choose Gearing Up?

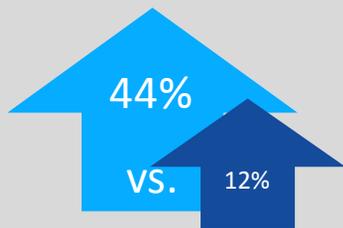


# Physical Measures



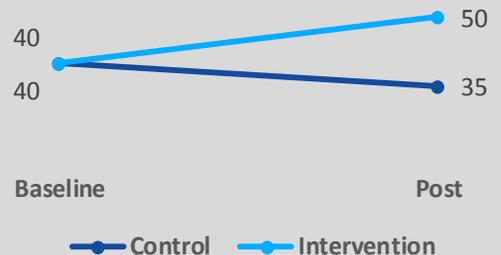
The following section highlights changes seen over time for those in the indoor cycling program, and compares them to the control group. This section has two parts. It first highlights changes that were statistically significant. Considering the small sample size, those changes that are significant can be assumed to be impactful change. This section then highlights other trends that, although not statistically significant, should be further examined in the future and with larger sample sizes.

## Significant Change and Differences

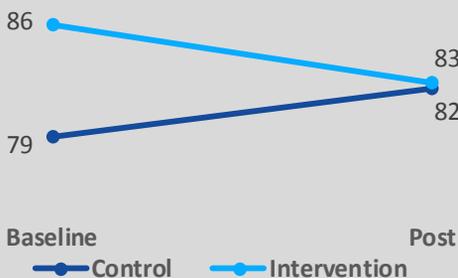


44% of indoor cyclists' increased their duration of exercise vs. 12% of control.

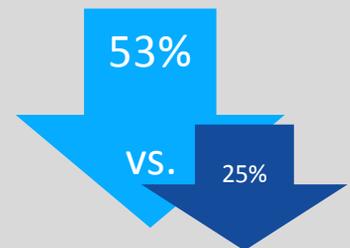
### Exercise Duration (in minutes)



### Resting Heart Rate



53% of indoor cyclists' resting heart rate decreased vs. 25% of control.



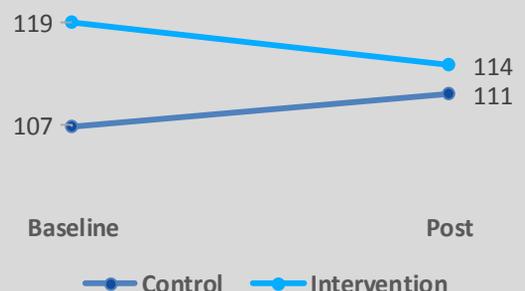
62%

VS.

28%

62% of indoor cyclists' recovery heart rate decreased vs. 28% of control.

### Recovery Heart Rate



# Physical Measures continued...

## Other Positive Programmatic Trends

### Intervention

### Control



Avg. change in  
Weight



Avg. change in  
BMI



Avg. change in  
Step Test Heart  
Rate



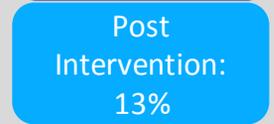
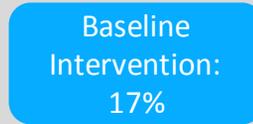
Avg. change  
in Body Fat %



#### A Note about Weight:

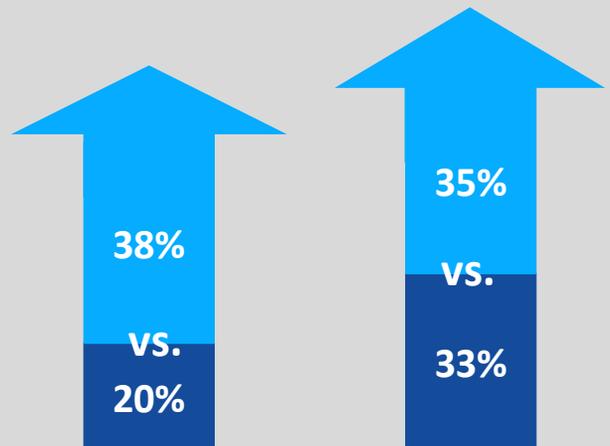
When using self-reported weights, the intervention group reported a *loss* of 2lbs a month, and women in control reported losing 4.2lbs a month from intake to baseline. This shows that women did not realize that they had gained weight since the start of their incarceration.

#### % Unable to Complete the Step Test



## % increased

A greater percentage of women in the intervention group saw an increase in their exercise frequency and their level of exercise intensity compared to the control group.



Exercise Freq.

Exercise Intensity

■ Control ■ Intervention

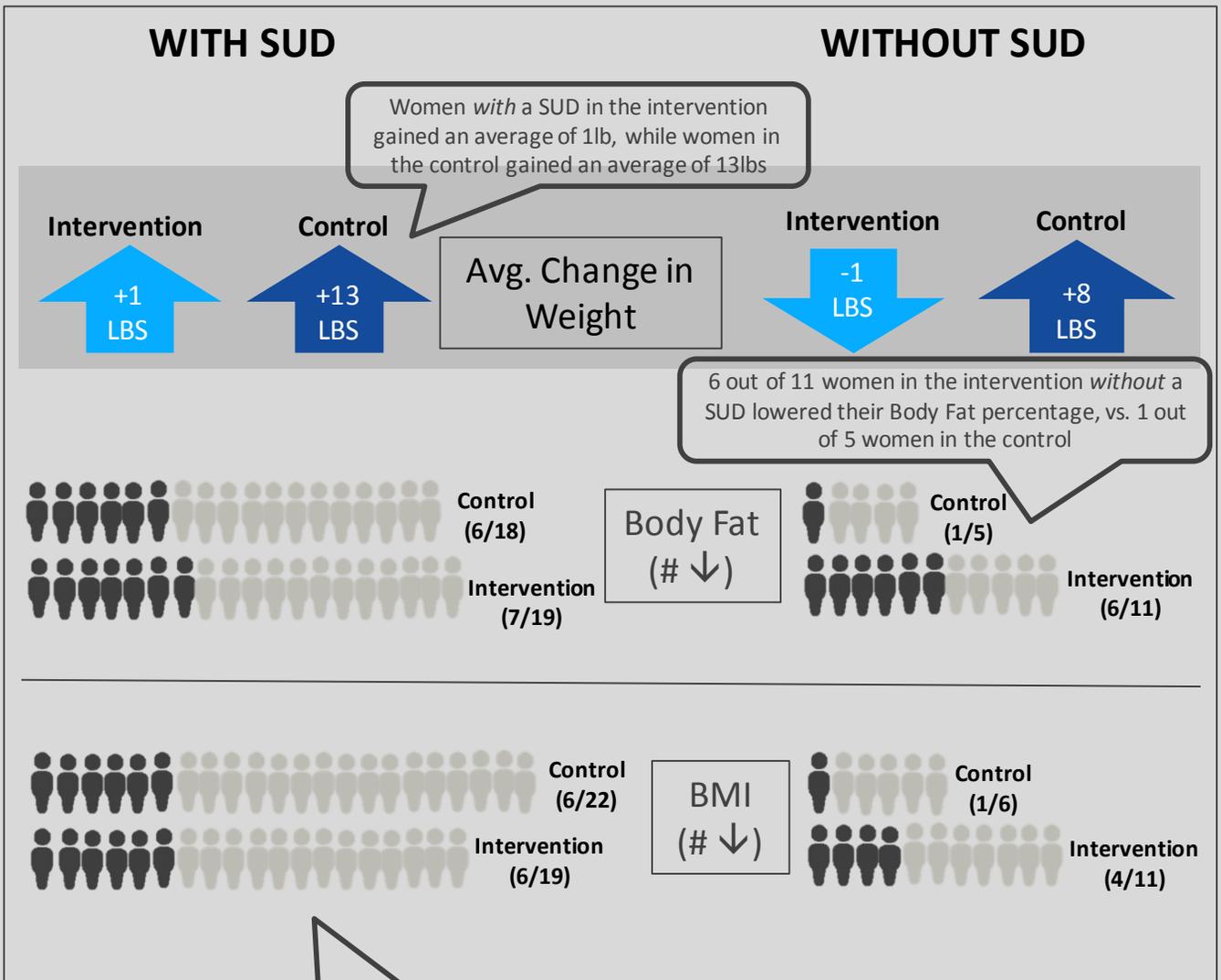
### Attendance and Weight Gain

There was a weak but negative relationship between the number of classes women in the intervention attended and how much weight they gained. In other words, the more classes they attended, the less weight they gained. While this finding was not significant, it may be a trend that can be explored further in future interventions.

# Physical Measures cont'd...

## The Intersection of Mental Health and Health Conditions

This section examines how physical outcomes differed across individuals with substance use disorders (SUD), serious mental illnesses (SMI) and serious physical illnesses (SPI), and those without these conditions. First, average change in weight during the intervention for each group is presented. Then, due to the small sample size, the number of women in each group who saw a decrease in their Body Fat percentage and BMI is presented. This page shows the outcomes for those with and without substance use disorders, as well as an explanation of the graphics. SMI and SPI are on the following page.



## WITH SMI

## WITHOUT SMI

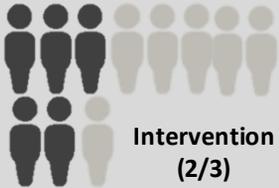
Intervention

Control

Avg. Change in Weight

Intervention

Control



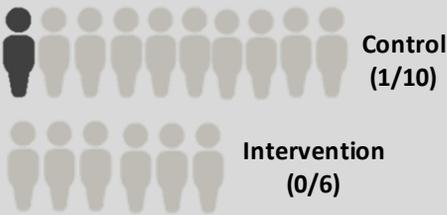
Control  
(3/8)

Body Fat  
(# ↓)



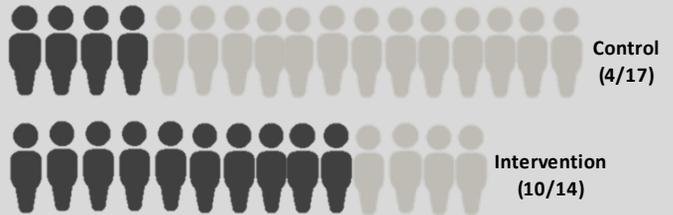
Control  
(4/14)

Intervention  
(11/13)



Control  
(1/10)

BMI  
(# ↓)



Control  
(4/17)

Intervention  
(10/14)

## WITH SPI

## WITHOUT SPI

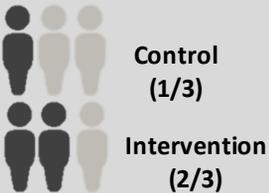
Intervention

Control

Avg. Change in Weight

Intervention

Control



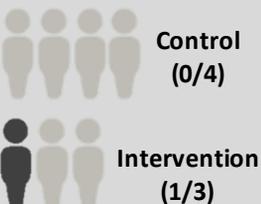
Control  
(1/3)

Body Fat  
(# ↓)



Control  
(6/20)

Intervention  
(7/19)



Control  
(0/4)

BMI  
(# ↓)



Control  
(7/16)

Intervention  
(5/19)

# Psychological Measures



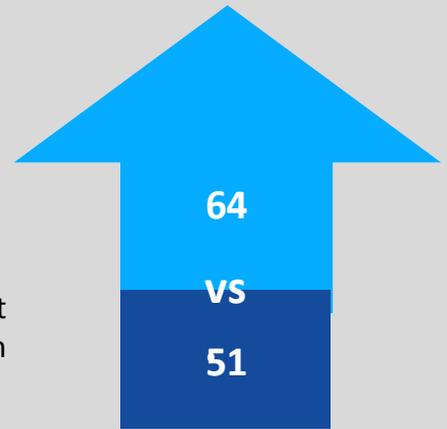
The following section reports changes in the attitudes of women in the indoor cycling group, and compares them to those in the control group. While there were no statistical significant differences or changes, there were several positive trends that can be noted, and should be re-explored with future interventions.

## Positive Programmatic Trends



### % increased

A greater percentage of women in the indoor cycling group felt more positively about their body image after the intervention than the control.



Body Image

■ Control ■ Intervention

## Other Trends (Mean Scores at Baseline and Post)\*

	Control		Intervention		Definition
	Baseline	Post	Baseline	Post	
Overall Health (5pt Scale)	2.9	3.2	3	2.8	General perception of one’s overall health (single item)
Quality of Life (5pt Scale)	2.4	2.6	2.7	2.5	Satisfaction with several dimensions of one’s life, including physical health, mood, and relationships.
Self-esteem (7pt Scale)	3.7	3.7	3.6	3.3	Overall evaluation of an individual’s own worth (from the Rosenberg Scale)
Self-efficacy (5pt Scale)	4.5	4.6	4.7	4.7	Perceived ability to be on time, remain clean and sober, and control behavior (Gearing Up created items)
Stress coping (5pt Scale)	2.8	2.9	2.8	2.6	Perceived ability to cope with pressure and external stress

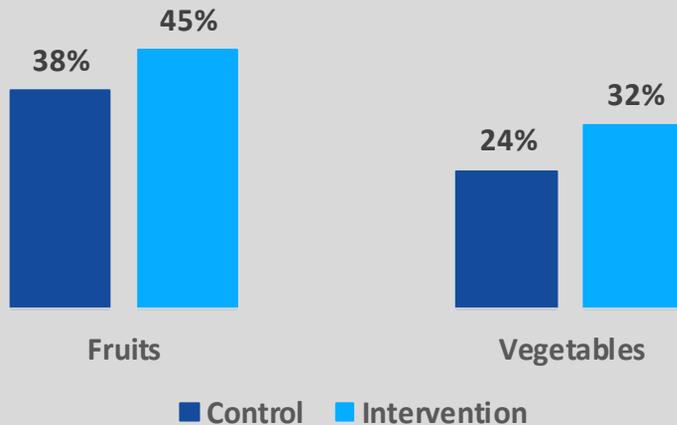
\*Lower scores denote more positive responses (E.g., For overall health Excellent = 1; Very Good = 2; Good = 3; Fair = 4; Poor = 5)

For those in the control group, number of social visits was positively associated with a greater increase in stress coping. There were no other significant relationships between official/social visits received and other psycho-social variables for either the intervention or control groups.

# Psychological Measures cont'd...

## Attitudes about Nutrition

Percentage of women who increased their daily number of servings

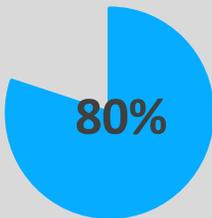


No one in either the control or the intervention group correctly identified the number of recommended servings of fruits/vegetables at either the baseline or the post.

## Relationships between Positive Attitude Changes and Illnesses

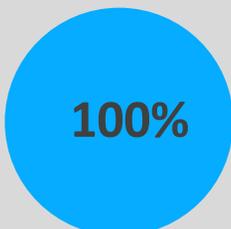
The following section highlights potentially important trends found in the relationships between outcome variables and SMI, SPI, and SUD.

### Social Connectedness



...of women in the intervention group with an SPI saw an increase in their social connectedness (compared to 53% in the intervention group without an SPI)

### Body Image



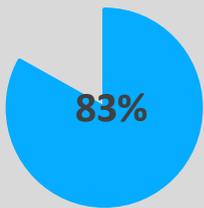
...of women in the intervention group with an SPI saw a positive increase in their body image (compared to 50% of the control group, and 53% in the intervention group without an SPI)

# Psychological Benefits for Participants



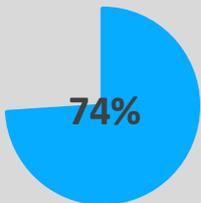
The following section assesses participants' change in psychological involvement with both Gearing Up and Biking, along with their perceived change in social connection because of Gearing Up. The concept of involvement measures an individual's level of psychological connection to an activity. In the initial survey, participants were asked their level of agreement with three statements of involvement, one for each of its dimensions: pleasure, centrality, and sign. The items were combined to form a single score ranging from one to seven. The following section highlights trends found in the data.

## Involvement with Gearing Up



...of participants increased their level of connection with Gearing Up

## Involvement with Biking

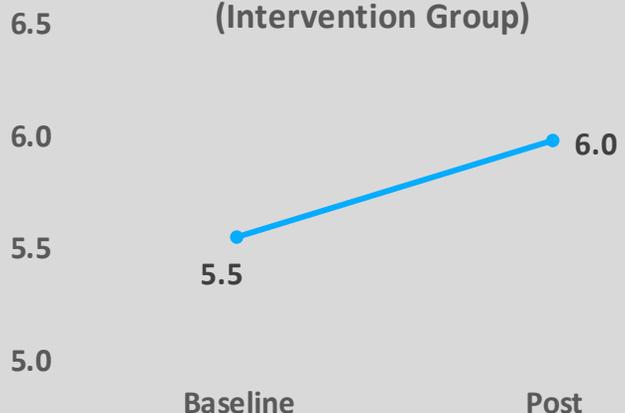


...of participants increased their level of connection with the activity of Biking

## Social Connection

Participants of Gearing Up were asked about the extent to which the program increased their sense of social connectedness. Questions included items like "Gearing Up has given me a chance to feel I really belong" and "Gearing Up has allowed me to feel close to people." Participants feeling of social connection through Gearing Up significantly increased from baseline to follow-up.

Change in Social Connection (Intervention Group)





**Sport Industry Research Center**



College of Health Professions and Social Work